

REMARKS

Claims 1 and 3-110 are pending in the application. Claims 1-6, 13-64, and 69-71 have been withdrawn from consideration. Claims 7-12, 65-68, and 72-110 are currently under consideration. Claim 7 has been amended to clarify that the filter element communicates between the first passage and a path of liquid filtrate flow. Claim 81 has been amended to provide an expanded liquid flow path sized to continue to draw liquid of the sample tangentially past the filter. Claim 81 has also been amended to clarify that the measure of volume flow is a “nanoliter” and not a “nanometer.” Claim 92 has been amended to delete the term glass from the claim. Claim 93 has been amended to recite that the claimed width is a total width. Claim 95 has been amended to recite that the first passage is from about 0.1 μ m to about 10 μ m wide. Claim 98 has been amended to recite that the liquid receiving means for enabling comprises a filter and that the means in liquid flow communication is for maintaining a tangential flow of the specimen liquid past the filter. Lastly, Claims 99 and 102 have been amended to recite liquid specimen instead of specimen liquid. Support for these Amendments can be found in the specification and claims as originally filed. Accordingly, no new matter has been introduced by these Amendments.

I. REJECTIONS UNDER 35 U.S.C. § 112

The Office Action has rejected Claims 7-12, and 73-80 under 35 U.S.C. § 112 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claim 7 has been amended to clarify that the filter element communicates between the first passage and a path of liquid filtrate flow. Claims 8-12, and 73-80 are dependent upon Claim 7. In view of this amendment, Applicants respectfully request that this rejection be withdrawn.

II. CLAIM OBJECTIONS

The Office Action has objected to Claim 81 because of the use of the term “nanometer”. Claim 81 has been amended to clarify that the measure of volume flow is “nanoliter”. In view of this amendment, Applicants respectfully request that this objection be withdrawn.

III. REJECTIONS UNDER 35 U.S.C. § 102

The Office Action has rejected the claims as allegedly being anticipated on a number of grounds. In particular, Claims 7-10, 65-68, 72-83, 85, 87-92, 97-105, and 107-110 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,090,251 to Sundberg et al. (hereinafter “Sundberg”). Claims 98-106 have also been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application 2004/0248167 to Quake et al. (hereinafter “Quake”). To that end, it is well established that a novelty defeating reference under 35 U.S.C. § 102 must disclose each and every feature of a claimed invention. As set forth below, Applicants respectfully submit that both Sundberg and Quake fail to disclose each and every feature of Applicants’ claims and therefore the instant rejections should be withdrawn.

A. U.S. Patent No. 6,090,251 to Sundberg et al.

As summarized above, independent Claims 7, 65, 81, and 98, and several claims depending therefrom, have been rejected as allegedly being anticipated by the disclosure of Sundberg. To that end, each of Claims 7, 65, 81 and 98 is generally directed to, and without limitation, an instrument for the observation, treatment or analysis of a liquid sample. In particular, Claim 7 is directed to an instrument for the observation, treatment or analysis of a liquid based on a drop size sample and recites, in part, the feature of a “first passage leading to a portion thereof proceeding tangentially past openings of the filter and to an expanded liquid flow path for drawing liquid therealong by capillary action.” Claim 65 is also directed to an instrument for the observation, treatment or analysis of a selected liquid and similarly recites, in part, the feature of a “first passage leading tangentially past the filter to an expanded flow path for drawing liquid therealong by capillary action.” Still further, Claim 81 is directed to an

instrument for the observation, treatment or analysis of a sample of a liquid and recites, in part, the feature of an expanded liquid flow path “sized to continue to draw liquid of the sample tangentially past the filter and therealong concurrently by capillary action.” Lastly, Claim 98 is directed to an instrument comprising, in part, a “means in liquid flow communication for maintaining a tangential flow of the specimen liquid past the filter and through the liquid receiving means by capillary action. Accordingly, each of these claims has a feature directed generally to a structure providing tangential passage or flow past a filter element.

Sundberg does not disclose a tangential structure whereby a passage or flow path extends tangentially past a filter element. In particular, with reference to FIG. 7, Sundberg teaches a flow path which passes through a filter channel 70, into an electroosmotic channel 76, and past a limiting region 90, positioned in one or more electrophoretic separation channels 78. Sundberg further teaches that the limit region 90 prevents a first fluid within the one or more electrophoretic separation channels 78 from passing into and filling the electroosmotic channel 76 and therefore acts as a liquid mixing barrier. No where in the reference does Sundberg teach or suggest that this limit region 90 can function as a filter. In fact, the only filter disclosed by Sundberg is structure 70 which is positioned at the bottom of an inlet reservoir and which is located upstream of the limit regions 90. Structure 70 functions to block entry of particulates from entering flow channel 18 that, if allowed, might impede flow through channel 18. Significantly, Sundberg does not disclose a flow or passage tangentially passing this filter structure 70.

Accordingly, for at least this reason, Sundberg fails to teach every feature of the instant claims and the instant rejection should be withdrawn.

B. U.S. Patent Application 2004/0248167 to Quake et al.

Claim 98 and the claims depending therefrom have also been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application 2004/0248167 to Quake et al. To that end, Claim 98 as amended is directed to an instrument comprising, an input for accepting a liquid specimen, liquid receiving means downstream of the input and in communication therewith for

enabling one of analysis, treatment and observation of liquid of the specimen, wherein the liquid receiving means for enabling comprises a filter; and means in liquid flow communication for maintaining a tangential flow of the specimen liquid past the filter and through the liquid receiving means by capillary action. As acknowledged by the Office Action, Quake fails to disclose an instrument comprising a tangential flow filter and therefore at least fails to disclose a means for maintaining a tangential flow of a specimen liquid past a filter, as claimed. Thus, for at least this reason, Quake fails to disclose each and every feature of the claimed invention and the instant rejection should be withdrawn.

II. REJECTIONS UNDER 35 U.S.C. § 103

The Office Action has further rejected a number of Claims as allegedly being obvious on a number of grounds. In particular, Claims 11, 12, 84, 86, 93-96, and 106 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over the teachings of Sundberg further in view of Quake. Claims 81-97 have also been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over “Brody” in view of Quake. Still further, Claims 107-110 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Quake further in view of Sundberg. To that end, in order to establish a *prima facie* case of obviousness, the art of record must teach, or at least suggest, the claimed invention as a whole. Moreover, there must be adequate motivation and a reasonable expectation of success to undertake the proposed modifications. As set forth below, Applicants respectfully submit that this standard has not been met by the instant rejections and, as such, the rejections under 35 U.S.C. § 103(a) should be withdrawn.

A. Rejection of Claims 11, 12, 84, 86, 93-96, and 106-110

Claims 11, 12, 84, 86, 93-96, and 106 have each been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over the teachings of Sundberg further in view of Quake. Similarly, Claims 107-110 have also been rejected as allegedly being obvious over the teachings of Quake in view of Sundberg. To that end, it is axiomatic that "dependent claims are non-obvious under section 103 if the independent claims from which they depend are non-obvious." *See In re Fine*,

5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). As set forth in detail above, Claims 7, 81, and 98, the independent claims from which Claims 11, 12, 81-97, and 106-110 depend, are non-obvious and in condition for allowance. In particular, as set forth above, each of Claims 7, 81, and 98 provide a feature directed generally to a structure providing tangential passage or flow past a filter element. Neither Sundberg nor Quake disclose a tangential passage or flow past a filter element. Further, there is no suggestion in either reference that would motivate one of ordinary skill in the art to arrive at a structure that provides a tangential flow as described. As such, the proposed combination of Sundberg in view of Quake or, alternatively Quake in view of Sundberg, fails to teach or suggest the invention as a whole and, as such, Applicants' respectfully request that the obviousness rejections of Claims 11, 12, 84, 86, 93-96, and 106-110 be withdrawn.

B. Rejection of Claims 81-97

Claims 81-97 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Brody in view of Quake. To that end, Claim 81 is directed to an instrument for the observation, treatment or analysis of a sample of a liquid comprising, in part, an expanded liquid flow path including a plurality of at least five liquid flow paths in communication with the first passage downstream location and sized to continue to draw liquid of the sample tangentially past the filter and therealong concurrently by capillary action to thereby prolong the period of continuous flow of liquid in the instrument and increase the volume of flow of liquid in the instrument to more than a nanoliter solely by capillary action.

As acknowledged on page 7 of the Office Action, Brody fails to disclose multiple liquid flow paths as claimed. Further, although Quake admittedly provides multiple flow paths, they are disclosed for their use in allowing multiple simultaneous analyses of a sample and not for providing improved flow of a sample liquid tangentially past a filter element. To that end, there is nothing in Brody or Quake that would suggest the desirability of using multiple flow paths in order to improve liquid flow past a filter. Therefore, even assuming *arguendo* that one of ordinary skill in the art would seek to combine the disclosures of Brody and Quake, the resulting

combination would still fail to provide a plurality of flow paths sized to continue to draw liquid of a sample tangentially past a filter. Therefore, the disclosure of Brody in view of Quake does not render the claimed invention obvious, and thus Applicants' respectfully request that the rejection to Claims 81-97 be withdrawn.

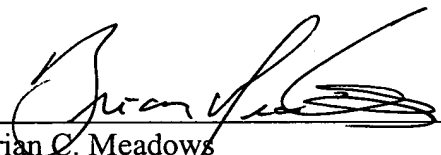
CONCLUSION

In view of the foregoing Remarks, it is respectfully asserted that the rejections set forth in the Office Action of December 28, 2005 have been overcome and that the application is in condition for allowance. Therefore, Applicants respectfully seek notification of same.

No additional fee is believed to be due in connection with this submission. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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Brian C. Meadows

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